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Introduction

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Bibliographic, full-text and multimedia databases available through intranets, extranets and the Internet are of paramount importance to all organizations large and small. Networked information services have proved to be an indispensable part of every day lives of users working for both commercial and non-profit organizations as well as of more casual users with personal interests to pursue. Almost half a billion people try to get access to networked information sources and services every day. More often than not they are confronted with too much information. Although search engines, "knowbots", and "intelligent agents" are of some use in this area, trying to find information among billions of electronic sources is likened to trying to "drink water from a fire hydrant". Well-designed electronic information management systems and services can facilitate users' tasks and enable them to better cope with too much information in their private and professional lives.

This special issue of *Information Services & Use* on Electronic Information Management aims to review current developments in electronic information management. Authors of six papers explore a wide variety of operational and policy issues with regards to electronic information management ranging from available sources and services to the description, organization, management, preservation and archiving of electronic information collections to infrastructure, and intellectual property rights of electronic information provision. What follows is a brief overview of each paper in the order of their appearance in the issue.

In the first paper, "Internet and Electronic Information Management", **Yaşar Tonta** reviews the latest developments in the electronic information scene. He draws attention to the amount of information produced annually in the world (about five exabytes), increasing processing, storage and transmission capacities of computers as well as declining costs of computer hard drives and network bandwidths. He discusses issues of electronic information description and organization in detail along with the development and management of electronic information collections. He reviews the developments in information technologies that are giving way to customization and personalization of electronic information services. Dr. Tonta emphasizes the importance of preserving and archiving electronic information and speculates whether publishers, information centers and aggreagators will assume this responsibility.

In their paper, "Reforming Scholarly Publishing and Knowledge Communication: From the Advent of the Scholarly Journal to the Challenges of Open Access", **Ana Maria Ramalho Correia** and **José Carlos Teixeira** review the evolution of scientific communication and discuss the current developments in electronic journals, electronic print (e-print) archives, and the Open Access (OA) movement. They

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provide examples of e-print archives containing electronic information sources that can be used for research. The arXiv.org, providing access to e-prints of articles on high-energy physics, is but one example. Professors Correia and Teixeira also describe initiatives to create a global network of archives of digital research materials (e.g., Open Archives Initiative, Budapest Open Access Initiative) and discuss the possible roles of library and information professionals in creating and maintaining OA institutional archives.

In their paper, **Gladys Cotter**, **Bonnie Carroll**, **Gail Hodge** and **Andrea Japzon** provide an overview of electronic collection management and electronic information services. After a brief discussion on the digital revolution that is currently taking place in library and information centers, they discuss the issue of selection of information for electronic collections and review acquisition, and access agreements in detail. Next, the authors review electronic information services and concentrate on electronic reference, information discovery and information delivery, and the education of users and personnel. They conclude that electronic collection management and electronic information services are in a period of rapid transition, and the technology used to manage the information allows for extensive innovation in information selection, description, distribution, retrieval, and use.

Gail Hodge reviews the issues regarding metadata for electronic information resources in her paper entitled "Metadata for Electronic Information Resources: From Variety to Interoperability". She first describes the purpose of metadata (to discover, locate and organize electronic information resources) and summarizes the characteristics of major metadata schemes (Dublin Core, MODS, ONIX, and EAD, to name a few). She discusses the issue of "metadata interoperability" among different schemes and describes metadata frameworks, crosswalks and registries in detail. She then emphasizes the importance of controlled vocabularies for interoperability and concludes that the integration of controlled terminologies and metadata schemes is also a key to the development of the Semantic Web.

In a paper entitled "Preservation of and Permanent Access to Electronic Information Resources: A System Perspective", **Gail Hodge** offers a framework for archiving and preserving electronic information and addresses a number of issues comprehensively. Among them are the creation and acquisition of electronic information, acquisition and collection development, metadata and archival storage formats for preservation, migration and emulation, and access requirements. She describes the major preservation-related systems including the Digital Information Archive System (DIAS), the OCLC Digital Archive, the PANDORA Digital Archiving System (PANDAS), LOCKSS (Lots of Copies Keep Stuff Safe), Portable PubMed Central, Dspace and Fedora. The paper ends with a discussion of trends and issues in preservation and archiving of electronic information.

The last paper by **Graham Cornish** addresses the intellectual property rights in the context of electronic information management. He explains access control devices including fingerprinting, watermarking, and stamping, and gives examples of their use in the European Union (EU) projects such as CITED (Copyright in Transmitted Electronic Documents) and COPYSMART. He discusses the impact of the latest EU directive on copyright and the information society and the complexities of implementing this directive in different legal regimes and cultural environments.

We should also mention the fact that the two papers that complement this special issue appeared earlier in this very journal (vol. 24, no. 4): "Information Discovery and Retrieval Tools" by **Michael T. Frame** (pp. 187–193), and "Infrastructure of Electronic Information Management" by **Gregory D. Twitchell** (pp. 195–208).